

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for modulating a non-return to zero (NRZ) signal transmitted to a receiver utilizing alternating left side and right side filtering for adjacent channels having alternating channel spacing, the method comprising:

modulating channels which are to be subjected to the right side filtering ~~using a modulator with~~ only a positive chirp; and

modulating channels which are to be subjected to the left side filtering ~~using a modulator with~~ only a negative chirp.

2. (previously presented): The method according to claim 1, wherein at the receiver, central frequencies of two consecutive filters, whether left-side or right-side, are equidistant in the frequency domain.

3. (previously presented): A transmission system comprising a transmitter, a transmitting fiber and a receiver,

the transmitter comprising a plurality of light sources for generating a plurality of channels, a plurality of modulators for modulating the channels, and a multiplexer for multiplexing the channels which have been modulated,

the receiver comprising a first demultiplexer for demultiplexing the channels which have been multiplexed, a plurality of filters for left-side and right side filtering the channels which have been demultiplexed, and a plurality of receivers for receiving the channels which have been filtered,

wherein the modulators of the transmitter modulate channels which are to be subjected to the left side filtering with a negative chirp and modulate channels which are to be subjected to the right side filtering with a positive chirp.

4. (previously presented): A transmission system according to claim 3, wherein the first demultiplexer demultiplexes the channels to be subjected to the left side filtering from the channels to be subjected to the right side filtering,

wherein the receiver further comprises:

a compensating fiber of positive chromatic dispersion which receives the channels subjected to the left side filtering; and

a second demultiplexer for demultiplexing the channels subjected to the left side filtering which are transmitted through the compensating filter and the channels subjected to the right side filtering.

5. (previously presented) A transmission system according to claim 3, wherein the first demultiplexer demultiplexes the channels to be subjected to the left side filtering from the channels to be subjected to the right side filtering,

wherein the receiver further comprises:

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a compensating fiber of negative chromatic dispersion which receives the channels subjected to the right side filtering; and

a second demultiplexer for demultiplexing the channels subjected to the right side filtering which are transmitted through the compensating filter and the channels subjected to the right side filtering.